

FOREST STEWARDSHIP MANAGEMENT PLAN

Prepared For: Carroll County BOE

> Prepared By: Jim Strong MFC

Time Period Covered by This Plan: 2012 - 2021

Date Plan Prepared: 2012-02-15

Plan Type: Stewardship / Stewardship

This plan was developed in accordance with the rules of the Stewardship program.

Property Name: S16-T20N-R3E

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LANDOWNER INFORMATION

Name: Carroll County BOE

Mailing Address: P O Box 256

City, State, Zip: Carrollton, MS 38917 Country: United States of America

Contact Numbers: Home Number:

Office Number: 662-237-9276

Fax Number:

E-mail Address:

Social Security Number (optional):

FORESTER INFORMATION

Name: Jim Strong, Service Forester

Forester Number: 00898 Organization: MFC

Street Address: P O Box 95

City, State, Zip: Carrollton, MS 38917

Contact Numbers: Office Number: 662-237-6732

Fax Number:

E-mail Address: jstrong@mfc.state.ms.us

PROPERTY LOCATION

County: Carroll Total Acres: 629 Latitude: -89.99 Longitude: 33.6

Section: 16 Township: 20N Range: 3E

DISCLAIMER

This information was derived from a small sampling of the forest resources. It reflects a statistical estimation that is only intended to be accurate enough for the purposes of making decisions for the short-term management of these resources. These estimations are temporally static. Events and circumstances may occur within the survey area that will physically alter the forest resources and therefore will not be reflected in this plan.

INTRODUCTION

This Forest Stewardship Management Plan will serve as a guide for accomplishing the goals and objectives for your property. In addition to addressing your specific goals and objectives, this plan includes recommendations for maintaining soil and water quality and protecting your forest from insects, disease, and wildfire. Recommendations are based on observation and assessment of the site.

OBJECTIVES

Timber Production

The goal is to produce high quality sawtimber. This will be accomplished through reforestation and timber stand improvement practices such as herbicide applications, prescribed burning, thinning at specified intervals, and other silvicultural practices. Forestry Best Management Practices will be implemented to prevent erosion and protect water quality.

Wildlife Management - General

The goal is to provide a diversity of habitats suitable for a variety of game and non-game wildlife species. Habitat management will focus on developing a variety of food, cover, water, and space. This will be accomplished by establishing and maintaining access roads and firelanes, providing openings within the forest, and the management of trees located within the Streamside Management Zone

PROPERTY DESCRIPTION

General Property Information

This section of 642 acres is located in the North part of Carroll County. Highway 35 runs north and south through the section. County Road # 125 runs east and west through the northern part of the section. A natural gas pipe line owned by Atmos also runs through the section. A gravel pit operated by the County Supervisors is active at the present time. Much of this section has Farm Resendential Leases and land that could be reclassifed as Forest. The land classifed as Forest is in timber production. Some pines plantations have been established on the farm residential leases with permission from the present leasee that no cattle grazing would take place for 5 years.

Water Resources

The drainages of this section are in the Big Sand Creek watershed. Big Sand Creek is a tributary of the Yazoo River. The objective is to protect, preserve and enhance all water sources and drainages on or transecting the property. Mississippi Best Management Practices will be implemented during all aspects of the management of this property to minimize the impact on all water resources.

Timber Production

The goal is to maximize the production of high quality timber. This will be accomplished through the application of timely thinning and other silvicultural practices designed to enhance timber quality and growth. Forestry Best Management Practices will be implemented to prevent erosion and protect water quality.

Threatened and Endangered Species

No threatened and endangered species were identified during the reconnaissance and evaluation of this property.

If any threatened and /or endangered species are discovered, immediate management procedures will be applied to protect these sensitive natural resources for future

generations.

Interaction with Surrounding Property

Prescribed practices should be carried out in a manner that will minimize adverse impacts on surrounding properties. Consideration should be given to potential air, water, visual, and other impacts. In addition, practices carried out should have positive effects on the surrounding community such as improved wildlife habitat and soil stabilization.

Soils General

Soils were evaluated on the property to determine the suitability of the site for the proposed activities. Forest practices were planned to minimize erosion or other adverse effects on the soil. The following soils are identified for this property: Memphis Silt Loam, Morganfield Silt Loam, loring Silt Loam and Gullied Land -Loringcomplex.

For a complete description of these soils, please see the Soil Type Section in this plan.

Archeological and Cultural Resources

No Archeological and Cultural Resources were identified during a reconnaissance of the property.

If any Archeological and/or Cultural Resources are discovered during the management of this property, immediate management practices will be applied.

GENERAL PROPERTY RECOMMENDATIONS

Forest Protection

A vigorous growing stand is the best defense to an attack from a variety of forest insects, plants and pathogens.

Insects and Diseases

Trees are subject to attack from insects and diseases. Different insects and diseases affect trees according to the age, species, and condition of the trees. Planted stands of pines and pure stands of hardwoods are particularly susceptible to attack. Since there are many different insects and diseases, no attempt will be made here to explain all of them. The property should be inspected at least annually for possible signs of insect and disease activity. Some things to look for are:

- Unseasonable leaf fall
- Discoloration of leaves or needles
- Pitch pockets on pine trees
- · Heavy defoliation of hardwood leaves
- Groups of three or more dying trees within a stand

This list does not cover all instances of insect or disease attacks. If anything unusual is noticed, report it to a forester. In most cases, insect and disease problems can be controlled if discovered early.

Fire Protection

The Mississippi Forestry Commission will establish and maintain all firebreaks around the property and other forest management areas on the property. These firebreaks will help to protect your property from wildfires. All firebreaks will be established and maintained according to Mississippi Best Management Practices.

Grazing

Tree seedlings should be protected from grazing until such time as the terminal bud of the sapling is beyond reach of livestock. Domestic livestock should be denied access to the tree planting area.

Boundary Lines

It is the responsibility of the landowner to ensure that all property lines and boundaries designating areas to receive forestry work are clearly identified and visible to all contractors.

Note: Some forest practices may cause temporary adverse environmental or aesthetic impacts. These practices will only cause short-term adverse impacts where they are installed. Special efforts will be made to minimize adverse effects when carrying out any of the practices. Examples include: site preparation, planting, prescribed fires, firebreak installation and maintenance, road installation and maintenance, pesticide applications and timber harvesting.

Water Quality Protection

The objective of the landowner is to protect, preserve and enhance all water sources on or transecting the property. This can best be achieved by implementation of Best Management Practices in all aspects of the management of the property.

Aesthetics

The goal is to assure that the property is managed in such a way that is aesthetically pleasing to the landowner as well as the community. Activities could include, maintaining buffer strips along the road and adjacent to the home site, planting wildflowers along the road, and trees with attractive fall and spring color along the drive and near the home site.

Ecological Restoration

Ecological restoration is the process of assisting the recovery of an ecosystem that has be degraded, damaged, or destroyed. A reconnaissance of the property has been conducted and no ecological restoration activities are recommended at this time.

Wildlife Mgt. Target Species

The objective of this practice is to provide habitat best suited for the featured or target species. Habitat management will focus on providing food, cover, water, and space to facilitate the target species.

Environmental Education

Environmental educational goals are to provide educational opportunities for children and adults through the development of items such as nature trails with tree identification markers, wildlife viewing areas, picnic areas, parking, public restroom facilities.

Wildlife Management General

The goal is to provide a diversity of habitats suited for a variety of game and non-game wildlife species. Habitat management will focus on providing a variety of food, cover, water, and space. This will be accomplished, in part, by establishing and maintaining access roads and firelanes, providing openings within the forest, and leaving mast producing and den trees.

This forest land on this section is leased out to 2 different hunting clubs which focus their hunting on deer and turkey. The Hunting Clubs plant food plots and firelanes to help supplement food for the native wildlife.

Timber Management

Timber management goals for this property are to manage timber resources in such a manner as to maximize timber production throughout the life of the stand.

Recreation

According to landowner objectives the recreational use of the property could prove to be an avenue for personal enjoyment or for generating income. An evaluation of your property should be conducted and a plan developed to accomplish your specific goals for recreational activities on your property.

SOIL TYPES

6E3

The Memphis component makes up 95 percent of the map unit. Slopes are 12 to 40 percent. This component is on uplands. The parent material consists of loess deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria.

5C2

The Loring component makes up 90 percent of the map unit. Slopes are 5 to 8 percent. This component is on uplands. The parent material consists of loess deposits. Depth to a root restrictive layer, fragipan, is 14 to 35 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 28 inches during January, February, March, December. Organic matter content in the surface horizon is

about 1 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria. Loblolly Site Index = 95.

5D3

The Loring component makes up 90 percent of the map unit. Slopes are 8 to 12 percent. This component is on uplands. The parent material consists of loess deposits. Depth to a root restrictive layer, fragipan, is 14 to 35 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 28 inches during January, February, March, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 6e. This soil does not meet hydric criteria. Loblolly Site Index = 95.

6F2

The Memphis component makes up 95 percent of the map unit. Slopes are 15 to 40 percent. This component is on uplands. The parent material consists of loess deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria. Loblolly Site Index = 90.

6

The Memphis component makes up 90 percent of the map unit. Slopes range from 5 to 40 percent. This component is on uplands. The parent material consists of loess deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria. Loblolly Site Index ranges from 90 to 105.

25

The Morganfield component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains. The parent material consists of silty alluvium deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 42 inches during January, February, March, April. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria.

5

The Loring component makes up 90 percent of the map unit. Slopes are 5 to 12 percent. This component is on uplands. The parent material consists of loess deposits. Depth to a root restrictive layer, fragipan, is 14 to 35 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 28 inches during January, February, March, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria. Loblolly Site Index = 95.

46

Generated brief soil descriptions are created for major soil components. The Gullied land is a miscellaneous area. The Loring component makes up 27 percent of the map unit. Slopes are 5 to 20 percent. This component is on uplands. The parent material consists of loess deposits. Depth to a root restrictive layer, fragipan, is 14 to 35 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 18 inches during January, February, March, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria.

STRATA

Strata 1

Strata Description

This Strata consists of the following stands: # 5, #19, #46 and #47 for a total of 9.9 acres. This strata is classified as a Farm Residential Lease and has cattle grazing at the present time. A final harvest sale was conducted in the fall of 2010 and all merchantable pine and hardwood timber was sold. The tract has grown back up in hardwood saplings and logging debri is scattered over the entire tract.

Strata Recommendations

The Mississippi Forestry Commission recommends that this land be reclassified as Forest land and the 9.9 acres be aerial sprayed with prescribe herbicides and site preparation burned and planted to loblolly pine seedlings. At the present time, loblolly pines can not be planted due to the cattle grazing. The pines would be managed on a 35 year rotation.

The BOE will need to advise the MFC of their decesion concerning the reclassification. inorder for us to plan for the reforestation work.

Strata 2

Stand Description

This strata consists of the following stands: # 4, #6, #12, #24, #29, #31, #34, #48, #50, #53, #55 and #62 for a total of 144.46 acres. This strata is a 1 year old loblolly pine plantation that was establised in February 2010 after all merchantable timber was sold and harvested. A survival check shows that the tract has approximately 546 trees per acre at this time. This Strata is classified as Farm Residential Lease but the present leased holders allowed the trees to be planted and agreed not to graze the land for 5 years.

Stand Recommendations

This loblloly pine stand will be managed on a 35 year rotation using sound forestry managemement practices. The Mississippi Forestry Commission does recommend that this land be reclassified to Forest Land.

Strata 3

Stand Description

This strata consists of the following stands: #14, #18 and #63 for a total of 92.25 acres. This strata was hand planted to loblolly pine seedlings in February 1998 after the the timber had been harvested and the tract was aerially sprayed and site preparation burned. The pines have an average diameter of 6.4 inches and there are 496 trees to the acre. The pines average 38 feet in total height and has 68 tons per acre.

Stand Recommendations

This loblolly pine stand will be managed on a 35 year rotation using sound forestry managemement practices. The strata will be thinned to lower the basal area which will create more sunlight for a period of time to the forest floor which will create more wildlife food and cover for the deer, turkey and othe native wildlife.

Activity Recommendations

Harvest

This Strata should be thinned to a BA of 75 +/- in 2015. A determination by the Mississippi Forestry Commission will be made prior to thinning on the best method of havesting the trees to be sold.

The thinning will enhance native grasses by allowing more sunlight to the forest floor which will be beneficial to native wildlife for several years after the thinning.

Fire Protection

Prescribed burning is recommended in this strata in order to reduce fuel loading and the potential damage from wildfire and to improve wildlife habitat. A prescribe burning plan must be developed and followed in the application of the burn. Because of equipment, personnel and weather requirements, the application of a prescribed fire is limited to only those days that meet requirements of the burning plan. A prescribed burn manager should be employed to conduct the burn. The Mississippi Forestry Commission (on a limited basis) and other prescribed burn vendors are available to

conduct prescribe burning.

Prescribe burning will be scheduled as follows:

Stand #14, #18 and #63 in the fall of 2017

Strata 4

Stand Description

This strata consists of the following stands: #1, #7, #8, #17, #18 and #19 for a total of 53.63 acres. This loblolly pine plantation was established in January 2005 after the strata was clearcut and then aerial sprayed with prescribed herbicides and site preparation burned. The pulpwood and chip-in -saw size pine timber have an average diamater of 6 inches and 390 trees to the acre. The average total height is 35 feet tall with 65 tons per acre.

Natvie wildlife use this pine plantation for cover and for some food sources.

Stand Recommendations

This loblloly pine strata will be managed on a 35 year rotation using sound forestry management practices.

This Strata should be inspected annually for any health problems that may arise, including bark infestation. The stands in this strata should be evaluated for the need of a first thin when they reach the age of 15 years old. The trees in this strata should be allowed to self prune until approximately 30% of the tree is live crown. The Mississippi Forestry Commission will determine when the stand is ready to be thinned and the best method thinning method to be used to continue the maximum growth of this plantation.

Activity Recommendations

Harvest

This strata will need to be evaluated in 2020 to determine if a first thin is needed at that time. The Mississippi Forestry commission will evaluate the stands and if a thin is needed, we will determine the best thinning method to use at that time to achieve an average basal area of 75 square feet per acre.

If a thinning is carried out, the increased sunlight to the forest floor will create more tender herbaceous vegetation for the native wildlife.

Strata 5

Strata Description

This strata consists of the following stands: #8, #9, #56 and #57 for a total of 56.49 acres. This well stocked loblolly pine plantation was hand planted in February 2003 after all merchantable timber was harvested and the tract was aerial sprayed with prescribed

herbicides and then site preparation burned. There are 496 trees to the acre that have an average total height of 18 feet.

Stand Recommendations

This loblloly pine stand will be managed on a 35 year rotation using sound forestry management practices. The strata will be thinned to lower the basal area which will create more sunlight for a period of time to the forest floor which will create more wildlife food and cover for the deer, turkey and othe native wildlife.

Activity Recommendations

Harvest

This strata will need to be evaluated in 2020 to determine if a first thin is needed at that time. The Mississippi Forestry commission will evaluate the stands and if a thin is needed, we will determine the best thinning method to use at that time to achieve an average basal area of 75 square feet per acre.

If a thinning is carried out, the increased sunlight reaching the forest floor, will create more tender herbaceous vegetation for the native wildlife.

Fire Protection

Prescribed burning is recommended in this strata in order to reduce fuel loading and the potential damage from wildfire and to improve wildlife habitat. A prescribe burning plan must be developed and followed in the application of the burn. Because of equipment, personnel and weather requirements, the application of a prescribed fire is limited to only those days that meet requirements of the burning plan. A prescribed burn manager should be employed to conduct the burn. The Mississippi Forestry Commission (on a limited basis) and other prescribed burn vendors are available to conduct prescribe burning.

Prescribe burning will be scheduled as follows:

Stand #8, #9, #56 and # 57 in the fall of 2019

Strata 6

Stand Description

This strata consists of the following stand: # 30, for a total of .81 acres. This strata is a 1 year old loblolly pine plantation that was establised in February 2010. A survival check shows that the tract has approximately 625 trees per acre at this time.

Stand Recommendations

This loblloly pine strata will be managed on a 35 year rotation using sound forestry management practices.

This Strata should be inspected annually for any health problems that may arise, including bark infestation. The stands in this strata should be evaluated for the need of a

first thin when they reach the age of 17 years old. The trees in this strata should be allowed to self prune until approximately 30% of the tree is live crown. The Mississippi Forestry Commission will determine if the stand is ready to be thinned and the best method thinning method to be used to continue the maximum growth of this plantation and advise the BOE at that time.

Strata 7

Stand Description

This strata consists of the following stands: #23, #54, #13, #20, #58, #59 and #60 for a total of 48.76 acres. This strata is a stand of hardwood pulpwood and sawtimber consisting of oaks;gums, beach, hickory, maples and ash trees growing along the drianages that flow into the creek. This strip of timber is a Stream Side Management Zone (SMZ) and helps protect the drainages from run off and helps maintain stream temperature. The average age is approximately 47 years old and the average diameter is approximately 11 inches and has approximately 118 trees to the acre with an average total height of 62 feet .

Stand Recommendations

This stand will be managed on a 65 year rotation. No activites are planned for this stand for the next 10 years.

This strata will be maintained as a Stream Management Zone which will enhance the beauty of the section by maintaining the stand for aesthetics values.

Strata 8

Stand Description

This strata consists of the following stands: # 2 and #3 for a total of 23.69 acres. This loblolly pine plantation was established in February 2011 at the rate of 691 trees per acre. The strata was recently planted because a wild fire last fall destroyed the 6 year old plantation that made up the strata. This wild fire area has incressed the native wildlife.

Stand Recommendations

This loblloly pine strata will be managed on a 35 year rotation using sound forestry management practices.

This Strata should be inspected annually for any health problems that may arise, including bark infestation. The stands in this strata should be evaluated for the need of a first thin when they reach the age of 17 years old. The trees in this strata should be allowed to self prune until approximately 30% of the tree is live crown. The Mississippi Forestry Commission will determine if the stand is ready to be thinned and the best method thinning method to be used to continue the maximum growth of this plantation.

OTHER PLAN ACTIVITIES

Boundary Lines

Line Description

Routine inspection and general maintenance of the roads, firelanes and boundary lines will ensure the overll appearance and aesthetics of the property.

Line Recommendations

The 4 miles of boundary lines will be repainted with red paint at eye level on the old hacked marks and all corners marked with a X to insure that the property boundaries are clearly identified.

Activity Recommendations

Property Activities

Routine inspections and general maintenance of the roads, Firelanes, and boundary lines will ensure overall appearance and aesthetics of the property.

All boundary lines will be marked with red paint during the summer of 2016.

Property Activities

Routine inspections and general maintenance of the roads, Firelanes, and boundary lines will ensure overall appearance and aesthetics of the property.

All property lines will be remarked with red paint during the summer of 2021.

S16-T20N-R03E Carroll County BOE





S16 T20N 3E Carroll County BOE

Hwy 35 Section 2012 to 2021 628.65 Acres





Stand Activity Schedule for Carroll County BOE 16 20N 3E

Strata	Stand	Activity	Acre	Est. Cost	Est. Revenue
2015					
3	14	Harvest, Mechanical, Thin, Machine, Loblolly	25	\$891.80	\$6,553.46
3	18	Harvest, Mechanical, Thin, Machine, Loblolly	64	\$2,240.00	\$16,460.80
3	63	Harvest, Mechanical, Thin, Machine, Loblolly	5	\$191.10	\$1,404.31
		Yearly Totals	95	\$3.322.90	\$24.418.57
2017					
3	14	Fire Protection, Other, Burn, Hand, Fuel Reduction	25	\$625.00	\$0.00
3	18	Fire Protection, Other, Burn, Hand, Fuel Reduction	64	\$1,607.75	\$0.00
3	63	Fire Protection, Other, Burn, Hand, Fuel Reduction	5	\$136.50	\$0.00
		Yearly Totals	95	\$2,369.25	\$0.00
2020					
4	1	Harvest, Mechanical, 1st Thin, Machine, Loblolly	3	\$95.90	\$411.11
4	33	Harvest, Mechanical, 1st Thin, Machine, Loblolly	7	\$245.00	\$1,050.28
4	35	Harvest, Mechanical, 1st Thin, Machine, Loblolly	15	\$525.35	\$2,252.10
4	40	Harvest, Mechanical, 1st Thin, Machine, Loblolly	8	\$293.30	\$1,257.34
4	41	Harvest, Mechanical, 1st Thin, Machine, Loblolly	3	\$121.80	\$522.14
4	43	Harvest, Mechanical, 1st Thin, Machine, Loblolly	69	\$2,405.90	\$10,313.75
5	8	Harvest, Mechanical, 1st Thin, Machine, Loblolly	38	\$1,330.00	\$5,701.52
5	9	Harvest, Mechanical, 1st Thin, Machine, Loblolly	15	\$523.95	\$2,246.10
5	56	Harvest, Mechanical, 1st Thin, Machine, Loblolly	4	\$140.35	\$601.66
5	57	Harvest, Mechanical, 1st Thin, Machine, Loblolly	0	\$0.35	\$1.50

Strata Stand	Activity	Acre	Est. Cost	Est. Revenue
	Yearly Totals	162	\$5,681.90	\$24.357.49
	Grand Totals	352	\$11.374.05	\$48.776.06